Attorney's Docket No.: 09712-132001 | Z-293 | 6 11.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

rt Unit

: Unknown

xaminer: Unknown

Applicant: Peter de Groot et al.

Serial No.: 10/053,106

Filed: November 2, 2001

Title : HEIGHT SCANNING INTERFEROMETRY METHOD AND APPARATUS

JUN 0 3 2002

INCLUDING PHASE GAP ANALYSIS

Commissioner for Patents Washington, D.C. 20231

INFORMATION DISCLOSURE STATEME

Applicant submits the references listed on the attached form PTO-1449, copies of which are enclosed.

This statement is being filed within three months of the filing date of the application or before the receipt of a first Office action on the merits. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 5/28/02

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*See attached document certifying that Marc M. Wefers has limited recognition to practice before the U.S. Patent and Trademark Office under 37 C.F.R. § 10.9(b).

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CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 09712-132001	Application No. 10/053,106
by Ap	closure Statement	Applicant Peter de Groot et al.	
(Use several shot) (37 CFR §1.98(b))	eets if necessary) JUN 0 3 2002	Filing Date November 2, 2001	Group Art Unit
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U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	6,195,168 B1	02/2001	De Lega et. al.	356	497	
	AB	5,398,113	03/1995	De Groot	356	360	
	AC	5,784,164	07/1998	Deck et. al.	356	511	
	AD	5,402,234	03/1995	Deck	356	497	
	AE	5,471,303	11/1995	Ai et. al.	356	497	

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass		lation No
	AF		22.0	, don omo	Oldos	<u> </u>	163	140
····	AG							
	AH							
	AI			<u> </u>				
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	Other Documents (include Author, Title, Date, and Place of Publication)				
Examiner Initial	Desig. ID	Document			
	AK	P. de Groot and Leslie Deck, "Surface profiling by analysis of white-light interferograms in the spatial frequency domain," J. Mod. Opt. 42(2), 389-401 (1995).			
	AL	T. Dresel, G. Hausler and H. Venzke, "Three-dimensional sensing of rough surfaces by coherence radar," Appl. Opt. 31(7), 919-925 (1992).			
	AM	Gordon S. Kino and Stanley S. C. Chim, "Mirau correlation microscope," Appl. Opt. 29(26), 3775-3783 (1990).			
	AN	Kieran G. Larkin, "Efficient nonlinear algorithm for envelope detection in white light interferometry," J. Opt. Soc. Am. A 4, 832-843 (1996)			
	AO	MC. Park and SW. Kim, "Direct quadratic polynomial fitting for fringe peak detection of white light scanning interferograms", Opt. Eng. 39(4) 952-959 (2000)			
	AP	A. Harasaki, J. Schmit and J. C. Wyant, "Improved vertical-scanning interferometry", Appl. Opt. 13(39), 2107-2115 (2000)			
	AQ	B.L. Danielson and C.Y. Boisrobert, "Absolute optical ranging using low coherence interferometry," Appl. Opt. 30(21), 2975-2979 (1991)			
	AR	A. Harasaki and J. C. Wyant, "Fringe modulation skewing effect in white-light vertical scanning interferometry," Appl. Opt. 39(13), 2101-2106 (2000).			

Examiner Signature	Date Considered			
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 09712-132001	Application No. 10/053,106	
by Ar	closure statement	Applicant Peter de Groot et al.		
(Use several sh (37 CFR §1.98(b))	neets if necessifilm 0 3 2002 6	Filing Date November 2, 2001	Group Art Unit	

AS	D. C. Ghiglia and Pritt, "Two-dimensional phase unwrapping: Theory, algorithms and software" (John Wiley & Sons, Inc., New York, 1998), p. 93.
AT	J. Schwider and L. Zhou, "Dispersive interferometric profilometer," Opt. Lett. 19(13), 995-997 (1994).
AU	S.W. Kim and G.H. Kim, "Thickness-profile measurement of transparent thin-film layers by white—light scanning interferometry." Appl. Opt. 38(28) (1999).
AV	M. Davidson, K. Kaufman, and I. Mazor, "The coherence probe microscope," Solid State Technology, 30(9) 57-59 (1987).
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AX	P. de Groot and L. Deck, "Three-dimensional imaging by sub-Nyquist sampling of white-light interferograms," Opt. Lett. 18(17), 1462-1464 (1993).
AY	P. Sandoz, R. Devillers, and A. Plata, "Unambiguous profilometry by fringe-order identification in white-light phase shifting inteferometry," J. Mod. Opt. 44, 519-534 (1997).
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ABB	P. de Groot, X. Colonna de Lega, J. Kramer, and M. Turzhitsky, "High precision surface inspection on the microscale by broadband interferometry", Proc. Fringe 2001, The 4 th International Workshop on Automatic Porcessing of Fringe Patterns, Wolfgang Osten and Werner Juptner Eds., Elsevier, pp. 333-340 (2001).
ACC	L. Deck and P. de Groot, "High-speed non-contact profiler based on scanning white light interferometry," Appl. Opt. 33(31), 7334-7338 (November 1, 1994).

Examiner Signature	Date Considered
EXAMINED: Initials situation considered Denvilles the seal situation if	



BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE UNITED STATE PATENT AND TRADEMARK OFFICE

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Marc M. Wefers is hereby given limited recognition under 37 CFR §10.9(b) as an employee of Fish & Richardson P.C., to prepare and prosecute patent applications wherein the patent applicant is the client of Fish & Richardson P.C. and the attorney or agent of record in the applications is a registered practitioner who is a member of Fish & Richardson P.C. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Marc M. Wefers' employment with Fish & Richardson P.C. ceases or is terminated, or (iii) Marc M. Wefers' ceases to remain or reside in the United States on an H-1B visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: January 7, 2003

Harry I. Moatz

Director of Enrollment and Discipline